

Attachment A. Material Safety Data Sheet (MSDS).



MATERIAL SAFETY DATA SHEET

Color-Crown Corporation
928 Sligh Avenue
Seffner, FL 33584

Date Prepared: August 10, 1999

Durothane B

PRODUCT IDENTIFICATION

TRADE NAME - Durothane B

CAS# - Mixture

CHEMICAL NAME - Biuret of Hexamethylene Diisocyanate; HDB; HDI Biuret

FORMULA - C₂₁H₃₂N₂O₂

DOT CLASS - 9

EMERGENCY CONTACT - Chemtrac (800) 424-9300

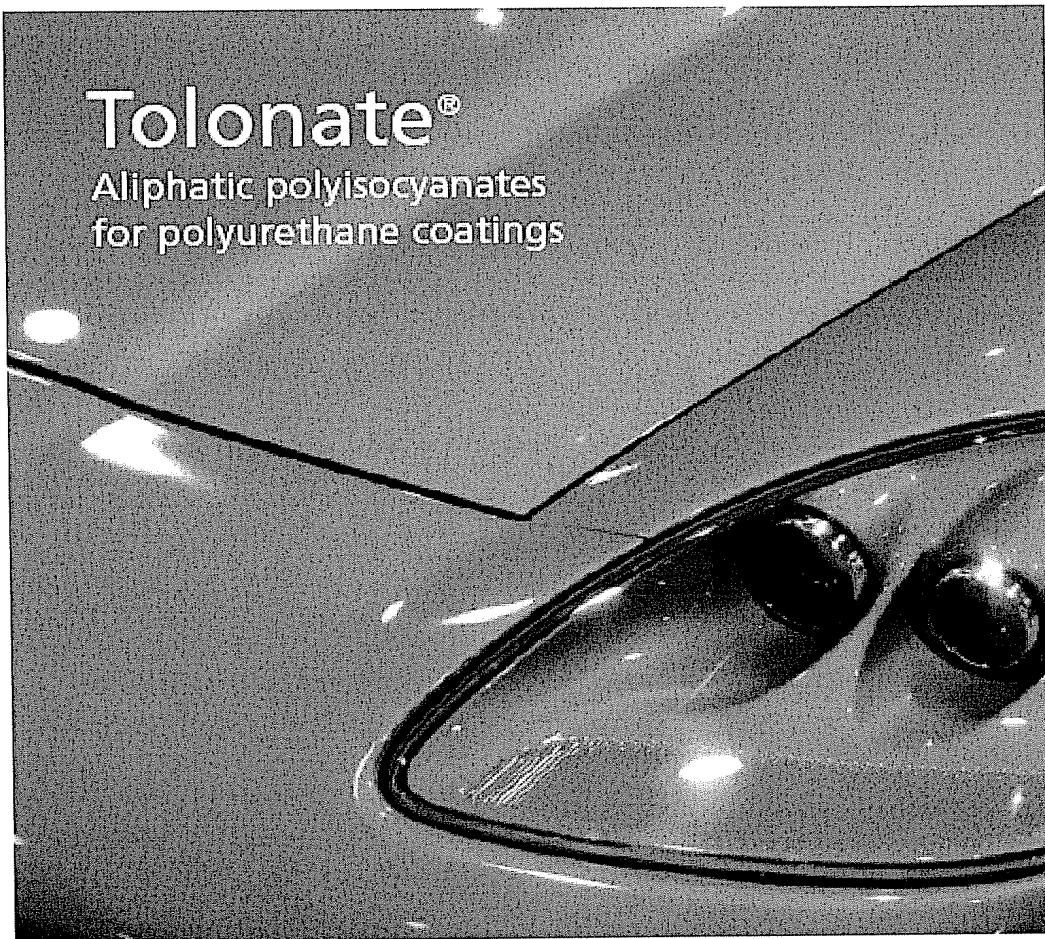
TELEPHONE NUMBER FOR INFORMATION - (813) 655-4680

OSHA Hazard Communication
Status: This product is hazardous under criteria of the federal OSHA hazard communication standard 29 CFR 1910.1200.

SECTION 1-HAZARDOUS INGREDIENTS

Component:	%:	OSHA-PEL:	ACGIH-TLV:
Homopolymer of HDI (CAS# 28182-81-2)	99.3		
The recommended Manufacturer guideline level for HDI based Polyisocyanates is: 0.5 mg/m ³ and 1.0 mg/m ³ . Short term exposure (STEL - averaged over 15 minutes)			
Hexamethylene Diisocyanate HDI (CAS# 822-06-0)	~%	ME	.005ppm TWA
Monomer content is less than 0.7% based on resin solid at the time of manufacturer. However, after 3-6 months storage, the free monomer content may rise to a maximum of 1.6%.			

Attachment B. Article on Tolonate® Aliphatic polyisocyanates



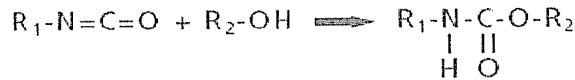
Our Tolonate® aliphatic isocyanates

- ⇒ Outstanding appearance
- ⇒ Exceptional gloss retention
- ⇒ Non-yellowing upon ageing
- ⇒ High-solids low VOC options
- ⇒ Fast drying possibilities

Leveraging the performances of polyurethane coatings

Polyurethane coating technology

Polyurethane coatings are based on binders formed by the reaction between a (poly)isocyanate (-NCO) and another polymer containing hydroxyl groups (-OH), commonly called polyol.



Polyurethane formation

The choice of raw materials, both polyols and (poly)isocyanates, is very large, enabling many combinations with a wide variety of properties. Polyurethanes based on aliphatic polyisocyanates are well-known for their outstanding properties, especially for their exceptional resistance to weathering.

The main applications where Perstorp Tolonate® range are ideal for polyurethane formulations are:

- ⇒ Automotive primers and clearcoats (both OEM and refinish)
- ⇒ Transportation coatings for buses, trucks, railway carriage and aerospace
- ⇒ Marine & protective coatings
- ⇒ Plastic coatings
- ⇒ General industrial coatings on metal and glass
- ⇒ Wood coatings
- ⇒ Can & coil coatings
- ⇒ Concrete coatings

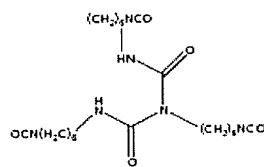


Figure 1. Tolonate® HDB

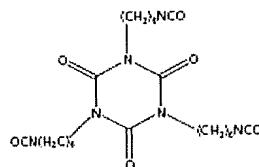


Figure 2. Tolonate® HDT

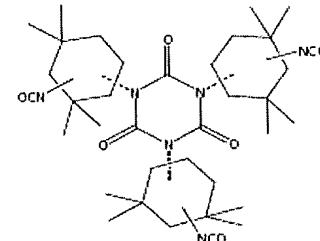


Figure 3. Tolonate® IDT

Our Tolonate® range

Tolonate® HDB-series

Due to internal hydrogen bonds (see figure 1), Tolonate® HDB-series are more polar than the other HDI derivatives. As a result, they show:

- ⇒ good compatibility with a wide range of resins (especially polyester polyols and alkyds)
- ⇒ very good adhesion to a lot of substrates

Tolonate® HDT-series

Thanks to their aliphatic nature and to their isocyanurate ring structure (see figure 2), Tolonate® HDT-series show:

- ⇒ exceptional UV and weathering resistance (non yellowing and very high gloss retention)
- ⇒ chemical and solvent resistance
- ⇒ ideal balance between high functionality and low viscosity, which explains their increasing usage in low VOC systems (high solids and solvent free formulations)

Tolonate® IDT-series

Due to their cyclo-aliphatic structure (see figure 3), Tolonate® IDT-series:

- ⇒ facilitate fast drying and improve initial and final hardness
- ⇒ produce coatings with improved resistance to acids and solvents